DOCUMENT RESUME

ED 418 993 TM 028 277

TITLE	Proficiency Score Standards for the Wisconsin Student Assessment System (WSAS) Knowledge and Concepts Examinations for Elementary, Middle, and High School at Grades 4, 8, and 10. Final Summary Report.
INSTITUTION	Education Development Center, Newton, MA. Center for the Development of Teaching.
PUB DATE	1997-11-00
NOTE	30p.
AVAILABLE FROM	Office of Educational Accountability, Wisconsin Department of Public Instruction, P.O. Box 7841, Madison, WI 53707-7841; telephone: 608-267-1069; World Wide Web: http://www.cpi.state.wi.us/oea/
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; Competence; Constructed Response; *Cutting Scores; Educational Assessment; Elementary Secondary Education; Essay Tests; Grade 10; Grade 4; Grade 8; Multiple Choice Tests; *State Programs; *State Standards; Tables (Data); *Test Results; *Testing Programs
IDENTIFIERS	Standard Setting; Wisconsin; *Wisconsin Student Assessment System

ABSTRACT

The Wisconsin Student Assessment System (WSAS) "Knowledge & Concepts" examinations were designed, under legislative mandate, to measure student knowledge in the areas of reading, language arts (including writing), mathematics, science, and social studies. This summary report provides information about the standard setting activities that were held in Green Lake (Wisconsin) in April 1997 for the Knowledge & Concepts Examinations. The report is organized into the following sections: (1) what the WSAS program is; (2) how the proficiency cut scores were set; (3) what the proficiency cut scores represent; (4) how each proficiency category is described; (5) how Wisconsin students compare with others; and (6) who the participants in the standard setting panels were. The WSAS examinations have two components, one component combines multiple-choice items with short-answer items and the other requires the student to respond to a writing test. In April 1997 a representative group of Wisconsin educators and other citizens served on nine panels to establish proficiency standards, which they indicated by placing "bookmarks" at the item in item-ordered booklets that represented the breaking point between proficiency categories of: (1) minimal performance; (2) basic performance; (3) proficient performance; and (4) advanced performance. This report has been updated with the final, approved cut scores and estimates of score distributions for 1996-97. On the fall 1996 examinations, Wisconsin students at the three grades tested (4, 8, and 10) scored well above the national comparison group on the multiple-choice and short answer sections of the test (writing comparisons were not made). (Contains six tables and one figure.) (SLD)

ED 418 993

State of Wisconsin
Department of Public Instruction
LEADERSHIP FOR EXCELLENCE IN PUBLIC EDUCATION

OFFICE OF EDUCATIONAL ACCOUNTABILITY

FINAL SUMMARY REPORT

OF THE PROFICIENCY SCORE STANDARDS

FOR THE WISCONSIN STUDENT ASSESSMENT SYSTEM (WSAS)

KNOWLEDGE & CONCEPTS EXAMINATIONS

FOR ELEMENTARY, MIDDLE, AND HIGH SCHOOL AT GRADES 4, 8, AND 10

TM028277

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

NOVEMBER 1997c

BEST COPY AVAILABLE

Where Can I Find Additional Information?

Additional copies of this *Final Summary Report of the Proficiency Score Standards* and other WSAS program related publications are available upon request from the Office of Educational Accountability. Please contact:

Audrey Honaker (608) 267-1069
Office of Educational Accountability
Wisconsin Department of Public Instruction
P. O. Box 7841
Madison, WI 53707-7841

Questions about the proficiency score standard setting process, as well as the WSAS program in general, may be addressed to:

William Erpenbach, Acting Director	(608) 267-9111
Will Ashmore	(608) 267-9179
Maggie Burke	(608) 267-3164
Frank Evans	(608) 266-1863
Rajah Farah	(608) 267-9283
Susan Ketchum	(608) 267-0425
Jean Whitcomb	(608) 267-2937
Office of Educational Accountability FAX	(608) 266-8770

Content specific curriculum questions related to the proficiency score standard setting may be addressed to:

John Fortier, Acting Asst. State Supt.	(608) 266-3361
Sue Grady, Director School Improvement Team	(608) 266-2364
Jacque Karbon, Reading	(608) 267-9268
Ellen Last, English/Language Arts	(608) 267-9265
Jodean Grunow, Mathematics	(608) 266-7712
Shelley Fisher Lee, Science	(608) 266-3319
Karen Prickette, Social Studies	(608) 267-9273
WI Dept. of Public Instruction	**(800) 441-4563**

An electronic version of this report is accessible at our worldwide web internet site:

http://www.dpi.state.wi.us/oea/

Detailed information about the WSAS examinations is also accessible at:

http://www.dpi.state.wi.us/oea/assessmt.html

In addition, the district assessment coordinator in each local school district may be contacted to examine the inspection copies of the tests, scoring guides and keys, writing anchor papers, and detailed local summary reports.

This ***Final Summary Report of the Proficiency Score Standards*** provides information to answer the "who, what, and how" questions about the standard setting activities that were held in Green Lake in April, 1997 for the *Knowledge & Concepts Examinations*. This report has been updated with the final, approved cut-scores and estimates of score distributions for 1996-97. The proficiency category, "partially proficient" has also been renamed as, "basic."

This summary report is organized to answer the following questions:

I. **What is the WSAS Program?** page 3

II. **How were the proficiency cut scores set?** page 5

III. **What do the proficiency scores represent?** page 7

IV. **How is each proficiency category described?** page 9

V. **How do Wisconsin students compare with others?** page 25

VI. **Who were the participants in the April 1997 Standard Setting Panels?** page 27

I. WHAT IS THE WSAS PROGRAM?

Section 118.30, *Wisconsin Statutes* requires the state superintendent to adopt or approve examinations designed to measure pupil attainment of knowledge and concepts. The Wisconsin Student Assessment System (WSAS) *Knowledge & Concepts Examinations* measure student knowledge in the areas of reading, language arts (including writing), mathematics, science, and social studies.

The purposes of the WSAS testing program are to:

- provide clear expectations for student learning.
- provide student achievement data related to the expectations.
- use assessment methods that promote high-quality curriculum and instruction.
- provide feedback to students to assist in educational and career planning.

The results of the WSAS testing are used by the Department of Public Instruction as an accountability measure for school improvement in order to:

1. meet its statutory requirement of identifying low performing schools as stipulated by s. 115.38(4), *Wisconsin Statutes*;
2. meet federal Title I, *Improving America's Schools Act* (IASA) requirement of using high-quality assessments to determine how well children are learning;
3. meet federal Title I (IASA) requirement to determine adequate yearly progress in Title I schools; and
4. determine the extent to which schools and districts across the state meet the state's proficiency standards.

What do the WSAS *Knowledge & Concepts Examinations* look like?

This new test series was based on the emerging national content standards, National Education for Education Progress (NAEP) frameworks, and state curriculum guides.

The WSAS *Knowledge and Concepts Examinations* have two components. One component combines multiple-choice items with short-answer items and a second component requires the student to respond to a writing test. These examinations include:

- multiple-choice and constructed-response, short-answer questions in each of the areas of reading/language arts, mathematics, science, and social studies; and
- an on-demand essay.

Multiple-Choice and Short-Answer Examinations

Multiple-choice items allow the student to select a response from among four choices. They are machine-scored. Short-answer items allow students to demonstrate their skills in more complex levels of thinking and are scored by a professional staff experienced in providing reliable and consistent hand-scoring services. Short-answer items allow partial credit for partially answered questions. Multiple-choice and short-answer items are thematically linked and are timed separately for all tests.

The content areas included in the WSAS *Knowledge and Concepts Examinations* are briefly described below.

Reading/Language Arts:

Basic and higher-order skills essential for effective communication- reading comprehension, language expression, vocabulary, and reference skills- are integrated in one test to provide a coherent assessment experience. Directions, passages, and test questions are linked by themes that provide context and stimulate interest. The test involves the student in thinking critically and creatively, solving problems, and constructing meaning.

Mathematics:

Real-world topics engage students' interest, provide context, and encourage confidence in their ability to do mathematics. Procedures such as estimation and mental computation are interwoven into the test. Computation items are included, many of them in a realistic setting to provide students with a sense of purpose. Reading and interpreting graphs, and principles of geometry and measurement are also assessed.

Science:

Core concepts in the traditional subject areas of life science, physical science, and Earth and space science are covered, as well as key science inquiry skills. The ability to recognize, understand, and apply scientific principles and methods are measured in the context of situations students encounter in their own lives. Many questions tap higher-order thinking skills such as analysis, syntheses, and evaluation.

Social Studies:

Thematic units interrelate social studies concepts; real-works materials such as maps, political cartoons, cultures, geographic areas, and perspectives help ensure equity for all students. The test emphasizes the interrelationships of history, geography, government, and economics in its framework, question formats, and graphics.

Each subject area test includes approximately 75 percent multiple-choice and 25 percent constructed response or short answer items. Each multiple-choice item requires the students to select the best possible answer among the several choices. The constructed-response, short-answer items are linked thematically with the multiple-choice items and give the students the chance to produce their own responses to show what they know and what they can do with their knowledge. The short answer questions are scored by professional staff and partial credit is allowed.

Writing Essay Examination

Each writing prompt begins with an introduction that explains the task, followed by a reading passage which provides a context for the writing assignment. The short reading passage includes excerpts from works of fiction and nonfiction by classic and contemporary writers that were selected for their grade-level appropriateness and literary value. Each student's on-demand essay is scored holistically on a six point scale. Holistic scales provide a reliable and valid basis for evaluating writing where trained evaluators assign a numerical score to each essay based on the overall merit

of the student's writing based on the scoring criteria and anchor papers.

The writing, on-demand essays, assess the areas of narrative, informative and persuasive writing which were spiraled (randomly assigned) in 1996-97 within classrooms at each grade. Future administrations of the test will include an essay from these writing genre or modes. Each writing sample is holistically scored at least twice, once each by two different evaluators. The rating scale ranges from 1 to 6, and if the two ratings are within one point of each other, they are averaged to obtain the final writing score. If the two ratings differ by more than one point, a third evaluator—a table leader or supervisor—also scores the writing and is responsible for assigning a final score.

In each content area tested, the multiple choice and constructed response items are scaled together by the contractor using item response theory (IRT). For the purpose of the standard setting and proficiency reporting, the writing essay is scaled with the multiple choice/short answer Language Arts test to form a combined content area of Language plus Writing (Enhanced Language).

II. How were the Proficiency Cut Scores Set?

The standard setting procedure selected for use in Wisconsin was designed and conducted by the testing contractor, CTB/McGraw-Hill. The panelists placed "bookmarks" at the item in their item ordered booklets that represented the breaking point between the proficiency categories: minimal performance, basic, proficient, and advanced. The panelists were asked to define the proficiency score standard(s) for each subject area using the *Bookmark Procedure* (Lewis, Mitzel, & Green, 1996), developed by CTB research scientists. A copy of the Lewis, Mitzel, & Green paper is provided in the *Technical Report*.

In April 1997, a representative group of Wisconsin educators and other citizens served on nine panels to study, debate, and recommend based on their collective expertise, proficiency score standards. The results of their deliberations are summarized in this report. The proficiency score standards will be used with subsequent administrations of the current series of WSAS examinations.

The Proficiency Score Standard Setting Panels were comprised of 185 panelists from 100 school districts; they included:

- third, fourth, seventh, eighth, ninth and tenth grade teachers,
- learning disabilities, bilingual, and Title I teachers,
- administrators,
- curriculum experts,
- school board members,
- guidance counselors,
- assessment coordinators, and
- other citizens from across the state.

Participants were drawn from recommendations by professional organizations, self-nominations, and other referral sources. Each nominee was asked to provide some indication of their area of qualification and experience. From the nomination pool, the department selected the most qualified panelists who also represented various areas of Wisconsin, brought a variety of experience, and were as well balanced as possible for gender, race/ethnicity, and other factors. Section V lists the districts and participant names of the panelists as well as official observers.

The panelists were asked to attend for the entire two or three day standard setting session

as required. Panelists' expenses were reimbursed by the contractor, however, the panelists' time was volunteered as a professional service. It should be acknowledged that many districts, other employers, and other organizations provided support to enable the panelists' release time.

Panelists received background information in the mail prior to the panel meeting. The fundamental tasks that participants performed under the Bookmark Procedure were to:

(a) study the test items in order of "difficulty" (IRT scale score location);

(b) determine the increase in the knowledge, skills, and abilities required to correctly respond to items as the items increase in difficulty;

(c) make judgments as to which items represent content that students in each proficiency category (Advanced, Proficient, Basic, and Minimal Performance) should know and be able to do and place a "bookmark" at the item in their item ordered booklet that represented the dividing point between each of the proficiency categories; and

(d) write descriptions of expected student performance at each level after the cut points had been established via the standard setting process.

The overall schedule followed by the standard setting panels was:

Table 1: **Standard Setting Panels Schedule: April 6-11, 1997**

Sunday April 6	Monday April 7	Tuesday April 8	Wednesday April 9	Thursday April 10	Friday April 11
Training 3:30 p.m.	4th Grade Science		8th Grade and 10th Grade Science		
Training 3:30 p.m.	4th Grade Mathematics		8th Grade and 10th Grade Mathematics		
Training 3:30 p.m.	4th Grade Social Studies		8th Grade and 10th Grade Social Studies		
Training 3:30 p.m.	4th Grade Reading and Language/Writing				
	Training 7:00 p.m.	8th Grade Reading & Language /Writing			
		Training 7:00 p.m.	10th Grade Reading and Language /Writing		

Under the Bookmark Procedure, participants placed their proficiency scores in a manner that directly reflects expected student performance. The Bookmark Procedure helps the panelist understand in an integrated way what the test measures, it makes the judgmental task concrete, and it best uses the professional experience of the participants.

Evaluations showed that panelists were overwhelmingly positive about the process used and the resulting standards that were set. The strength of the process stems from three sources:

First and fundamental was the use of a specially mapped test booklet containing two years' test questions and ordered from the easiest to the most difficult items providing empirical data for the judgment process.

Second, the make up of the panels and the progression of deliberations in each round of rating beginning with individual-level judgments, to table-level discussion, to room-level discussion, to the provision of statewide context with "impact data," informed the panelists of others' views and experiences while maintaining the ratings at the individual level. The inclusion of adjacent grade-level teachers and the combined middle school/high school panel, allowed perspectives in the discussions that were across the various view points.

Third, the table leaders, room leaders, and other staff facilitated discussions which, on the whole allowed all participants to be heard by the panel prior to placing their bookmarks.

The goal of each round was to provide individual judgments and yet there was a high degree of consistency of ratings as evidenced by nearly identical mean and median bookmarks (documented in the *Wisconsin Proficiency Score Standards Technical Report*).

III. WHAT DO THE PROFICIENCY SCORES REPRESENT?

Proficiency cut-scores are stated in terms of *TerraNova* scale scores, the basic underlying score on this assessment. Scale scores are based on the students' correct responses and also take into account the item difficulties, discrimination indices, and chance of guessing on selected response questions. The *TerraNova* scales for each content area range across the levels for which the test series was designed, from kindergarten-sixth month to the end of twelfth grade.

The proficiency cut-scores are based on the actual knowledge and skills as represented by test items that panelists expected of the students by October of the particular grade. The content descriptors for each content area provide interpretations for those proficiency categories.

Beginning in January 1998, student scores on the WSAS *Knowledge & Concepts Examinations* will be reported in terms of four proficiency categories in addition to normative and other scores. The proficiency categories are described in general terms as follows (see Table 2).

Table 2: **GENERAL PROFICIENCY CATEGORIES**

ADVANCED	PROFICIENT	BASIC	MINIMAL PERFORMANCE
Distinguished in the content area. Academic achievement is beyond mastery. Test score provides evidence of in-depth understanding in the academic content area tested.	Competent in the content area. Academic achievement includes mastery of the important knowledge and skills. Test score shows evidence of skills necessary for progress in the academic content area tested.	Somewhat competent in the content area. Academic achievement includes mastery of most of the important knowledge and skills. Test score shows evidence of at least one major flaw in understanding the academic content area tested.	Limited achievement in the content area. Test score shows evidences of major misconceptions or gaps in knowledge and skills tested in the academic content area.

Table 3 estimates the impact of the proficiency score standards based on the total statewide population reported for the fall of 1996 test. The estimates were revised on October 20th, 1997 to reflect the adjustments made to the cut scores for elementary social studies, middle level reading, and high school math.

Table 3:

Wisconsin Student Assessment System

ESTIMATED PERCENTAGE OF WISCONSIN STUDENTS IN EACH PROFICIENCY CATEGORY BASED ON APPROVED CUT-SCORES*

1996-97 *Knowledge & Concepts Examinations*

Statewide Student Group		Enrollment at Test Time	Proficiency Category				
			Not Tested on WSAS	Minimal Performance	Basic	Proficient	Advanced
READING							
Elementary	**Grade 4**	64,421	8%	8%	16%	55%	13%
Middle level	**Grade 8***	66,312	5%	15%	13%	49%	17%
High school	**Grade 10**	70,410	10%	14%	21%	35%	19%
LANGUAGE/WRITING							
Elementary	**Grade 4**	64,421	8%	10%	44%	35%	3%
Middle level	**Grade 8**	66,312	5%	19%	38%	37%	2%
High school	**Grade 10**	70,410	11%	14%	24%	40%	10%
MATHEMATICS							
Elementary	**Grade 4**	64,421	8%	9%	33%	38%	13%
Middle level	**Grade 8**	66,312	5%	25%	42%	20%	7%
High school	**Grade10***	70,410	10%	33%	26%	23%	7%
SCIENCE							
Elementary	**Grade 4**	64,421	8%	6%	19%	51%	16%
Middle level	**Grade 8**	66,312	5%	17%	28%	38%	13%
High school	**Grade 10**	70,410	11%	19%	33%	29%	8%
SOCIAL STUDIES							
Elementary	**Grade 4***	64,421	8%	7%	15%	44%	26%
Middle level	**Grade 8**	66,312	6%	8%	16%	41%	29%
High school	**Grade 10**	70,410	11%	12%	15%	36%	25%

Estimates based on fall 1996 test administration and reported total enrollments.

Based on scores adjusted for 8th Reading, 10th Mathematics, and 4th Social Studies as approved on October 20, 1997. *Basic* category previously labelled as *Partially Proficient.

The differences in proficiency cut-scores between the content areas as well as the percentages of students falling into each category are the result of several factors. Among the variables are: the content match of this particular test series with what is taught in local schools, the difficulty of the test content, and the make up of the panel. The standard setting process was designed to minimize all of the extraneous factors. The results of the standard setting process provide expectations of

what proficient students should be able to demonstrate on this examination.

The standard setting process was designed to minimize all of the extraneous factors that affect the panel judgments. The results of the standard setting process provide expectations of what proficient students should know and be able to demonstrate on this examination by the fall of the grade tested. This expectation is a content-based standard.

IV. HOW IS EACH PROFICIENCY CATEGORY DESCRIBED?

The *Bookmark* procedure is designed to simplify the judgmental task required of participants and facilitate the writing of valid proficiency category descriptions. The descriptions were obtained by examining the specific test questions that participants of the standard setting workshop determined all students in a given performance level should know and be able to do. The curriculum experts and other panelists were able to determine the knowledge, skills, and abilities required to correctly answer a multiple choice item or obtain a given score point on constructed response items.

For example, to write the description of the student performance in the Proficient category, the committee members were asked to synthesize the content of items that fell within that category in the ordered item booklet. These items represent the content that ***most, but not all***, students performing in the Proficient category know and are able to do. The same procedure was used for the other proficiency categories.

Then, to streamline the descriptors, the committee members were asked to express the descriptors in the following fashion:

- Most students with scores in the **Basic category** have the knowledge, skills, and abilities noted in the Basic description. Some of the students that perform in the Basic category also have some of the knowledge, skills, and abilities contained in the Proficient description, but not enough of them to earn Proficient classification. By working on the skills ascribed to the Proficient level student, the student with scores in the Basic category can obtain the skills necessary to place in the Proficient performance level.
- Most students with scores in the **Proficient** category have the knowledge, skills, and abilities noted in the Proficient description. Some of the students in the Proficient category also have some of the knowledge, skills, and abilities contained in the Advanced student description, but not enough of them to earn Advanced classification. By working on the skills ascribed to the Advanced category,, the Proficient level student can obtain the skills necessary to place in the Advanced performance level.
- Most students with scores in the **Advanced** category have the knowledge, skills, and abilities noted in the Advanced description. Some but not all of the students in the Advanced category may also have some of the knowledge, skills, and abilities.

After the standard setting, the proficiency descriptors drafted by the committee members go through a series of revisions. First, some continuity between grades is established by the large group leaders with input from Wisconsin DPI. Following this revision, the descriptors are considered the long version; a shorter version is then developed for the purposes of the reports. The long version follows in order to provide meaning to the proficiency categories. Scale scores for the proficiency categories appear in parentheses.

The descriptors that follow provide meaning to proficiency score categories for each content area and grade level tested by the *Knowledge & Concepts Examinations*.

ELEMENTARY **READING** AT GRADE 4

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • in-depth comprehension of a variety of complex texts; • use of critical thinking skills to infer, evaluate, and extend the meaning of literal and figurative material; • use of graphic organizers to comprehend text; • comprehension of advanced vocabulary; and • use of effective reading strategies when faced with difficult material. *(scale scores 684 and above)*
Proficient	Demonstrates: • a strong understanding of what is read and the interpretation of a variety of challenging material; • a number of strategies for understanding passages about unfamiliar subject matter; and • recall of literal detail from a variety of reading passages. *(scale scores 625 to 683)*
Basic	Demonstrates: • a surface level understanding of what is read; • interpretation of major features of narrative such as main ideas and character motivation; • understanding of basic vocabulary and recall of literal information from simple expository passages; • evidence of a limited number of reading strategies for use when encountering difficulty in reading. *(scale scores 600 to 624)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

MIDDLE LEVEL **READING** AT GRADE 8

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • in-depth comprehension of what is read and extensive interpretation of a variety of texts such as inferring probable cause and analyzing author's unique use of language to convey tone and mood; • evidence of consistent and appropriate use of reading strategies; • critical assessments of the effect of texts and identifying underlying themes; and • knowledge gained comparing information across texts. *(scale scores 718 and above)*

MIDDLE LEVEL **READING** AT GRADE 8 (CONTINUED)

Proficient	Demonstrates: • a strong understanding of what is read and interpretation of a variety of texts, such as identifying major ideas and important details in informational texts; • evidence of inferring a character's feelings and motivation and predicts future attitudes; • evidence of use of reading strategies to enhance comprehension;and • evaluation of texts through recognition of an author's intention and evaluation of character actions and opinions. *(scale scores 672 to 717)*
Basic	Demonstrates: • somewhat competent or surface level understanding of what is read; • interpretation of major features of narrative text such as main ideas, probable outcome, character traits and motivation; • occasional identification and use of reading strategies, such as recognizing supporting evidence for a selected response; and • basic awareness of author intent in narrative texts through recognition of meaning of figurative language *(scale scores 655 to 671)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

HIGH SCHOOL **READING** AT GRADE 10

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • in-depth comprehension of a variety of complex text, interpretation of the author's purpose or point of view, and provision of detail to support inferences; • use of analysis to differentiate concrete from abstract, to summarize, draw insightful conclusions, and extend meaning beyond the text; • understanding of extensive vocabulary and display of a sophisticated understanding of literary elements. *(scale scores 727 and above)*
Proficient	Demonstrates: • competent use of a variety of reading strategies, such as using context and format clues to derive meaning and differentiate between main and subordinate ideas; • comprehension of a variety of text material, use of analytical skills to distinguish fact from opinion; drawing inferences, summarizing, and making comparisons across texts; • a broad vocabulary; and • knowledge of some literary elements, such as use of figurative language, story structure, and text structure. *(scale scores 694 to 726)*
Basic	Demonstrates: • somewhat competent use of reading strategies and vocabulary to derive meaning, recall information, and draw conclusions from a variety of simple texts; • limited extension of meaning beyond text; and • recognition and understanding of some literary elements, such as plot and character traits. *(scale scores 666 to 693)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

ELEMENTARY **ENHANCED*** **LANGUAGE** AT GRADE 4

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • a clear voice, a sense of purpose and audience; • writing that is interesting to read; is focused, and has logical, well-developed support; • a command of language usage, spelling, syntax, punctuation, and capitalization; • recognition and correction of errors in tense, and in the forms of plurals and pronouns; and • editing of most mechanics and usage errors in the writing of others. *(scale scores 704 and above)*
Proficient	Demonstrates: • organized writing that is focused on the topic; ideas are developed and supported by detail; • generally correct sentence structure, language usage, spelling, syntax, and mechanics; and • editing for obvious usage and mechanical errors in the writing of others. *(scale scores 649 to 703)*
Basic	Demonstrates: • somewhat competent writing with some evidence of organization, though it may be inconsistently implemented; • somewhat competent writing with ideas only partially developed with few supporting details; • errors in usage, mechanics, and syntax are sufficient to detract from meaning occasionally; and • somewhat competent editing the writing of others for terminal punctuation, fundamental usage errors, and capitalization of names of persons, places, days of the week, months of the year, and the pronoun "I." *(scale scores 606 to 648)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

*Enhanced Language score combines the writting essay with the Language Arts test .

MIDDLE LEVEL **ENHANCED* LANGUAGE** AT GRADE 8

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • writing which illustrates a personal style in word choice, detail and original ideas; • focused, fully developed and clearly written work; and • command of mechanics and usage, or finding and correction of errors. Can respond adequately to an on-demand writing task. Demonstrates mastery of identifying correct mechanics, usage, organization, and style. *(scale scores 753 and above)*
Proficient	Demonstrates: • competent writing which is consistently organized and focused, contains well-developed ideas which are supported by relevant details; • written work that is characterized by conventional sentence structure, word choices and transitions; • competent recognition and correction of most errors contained in a proofreading sample; • identification of topic, supporting, and concluding sentences as appropriate to a paragraph, and consistent recognition of correct mechanics, usage and organization. *(scale scores 708 to 752)*
Basic	Demonstrates: • some evidence of organization and focus in writing, although not consistently; • work that may contain fragmentary and undeveloped ideas or lists of unrelated details; • use of unconventional sentence structure, word choice or mechanics may draw attention from the content; • identification of the best combination of two simple sentences or an irrelevant sentence embedded in a paragraph; and • somewhat competent recognition of the correct sentence structure and usage. *(scale scores 650 to 707)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

*Enhanced Language score combines the writting essay with the Language Arts test .

HIGH SCHOOL **ENHANCED* LANGUAGE** AT GRADE 10

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates: • generation of original ideas and unique style in word choice and detail; • writing with consistent focus, organization, and significant development of ideas; • usage of effective paragraphing and appropriate format; • mastery of language conventions; and • consistent recognition and correction of complex structural errors in the writing of others as well as more typical errors of usage and mechanics. *(scale scores 757 and above)*
Proficient	Demonstrates: • competent writing that is organized and focused; usage of complete, well-developed thoughts supported by sufficient verification; • conventional use of sentence structure, word choice, and transitions; and • application of usage, mechanics, and format and recognition of most substandard use of these elements. *(scale scores 715 to 756)*
Basic	Demonstrates: • somewhat competent evidence of organization and focus; some underdeveloped ideas, use of simple lists or insufficient detail; • unconventional sentence structure or word choice that may draw attention away from content, as may less than standard usage and mechanics; and • somewhat competent identification of the most obvious errors in the writing of others. *(scale scores 668 to 714)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

*Enhanced Language score combines the writting essay with the Language Arts test .

ELEMENTARY **MATHEMATICS** AT GRADE 4

Proficiency Level	Proficiency Descriptors
Advanced	• Demonstrates all the characteristics of proficient performance; consistently exhibits superior performance, especially in problem solving and mathematical communication. • In data analysis, draws information from multiple sources and infers solutions, providing data-based conclusions. • When solving real-world, non-routine problems, employs multiple strategies, where applicable, as well as shows in-depth reasoning. • Displays a highly developed sense of number and number relations and an understanding of number theory and the properties of numbers and operations. *(scale scores 659 and above)*
Proficient	• Consistently exhibits mastery of basic conceptual knowledge, skills, and problem solving. • Applies the four fundamental operations with whole numbers, adds and subtracts decimals and fractions, and determines the reasonableness of answers. • In geometry identifies two-and three-dimensional figures, congruence of figures; uses physical models to examine relationships. • Analyzes data from visual displays and applies it to solve problems. • Uses appropriate tools, understands appropriate units, and measures length to a specified degree of accuracy. *(scale scores 623 to 658)*
Basic	• Demonstrates a good portion of expected conceptual knowledge and skills but may not be as proficient in applying them to problem solving situations. • Solves simple one-step story problems, • Mathematical computation is limited to addition and subtraction of whole numbers, simple basic multiplication facts, and addition of decimals without regrouping. • Recognizes, fills-in and extends numerical and geometric patterns. Reads a ruler and a thermometer. *(scale scores 581 to 622)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested..

MIDDLE LEVEL **MATHEMATICS** AT GRADE 8

Proficiency Level	Proficiency Descriptors
Advanced	• Consistently demonstrates very high levels of conceptual understanding, numerical, geometric and measurement skills, and problem solving ability. • Accurately applies computational skills with whole numbers, fractions, decimals, percents and integers to the solution of non-routine problems. • Uses knowledge of statistical techniques and theory of probability to establish conclusions and infer future events. • Communicates in a thorough and logical manner about solution strategies, the validity of their own conjectures, and the inferences of others. *(scale scores 750 and above)*
Proficient	• Demonstrates mastery of computational and estimation skills with decimals, fractions, and integers and applies these skills to the solution of two-step problems. • Shows ability to work with various kinds of visual displays of data, using them to support conclusions. • Applies measurement skills to determine perimeter and area in both customary and metric units. • Demonstrates competent analysis, solving, and evaluation of solutions to real world problems by using appropriate symbols, tables, graphs, and algebraic expressions. *(scale scores 718 to 749)*
Basic	• Demonstrates somewhat competent conceptual knowledge and skills. • Performs basic operations on whole numbers, decimals, and some fractions. In data analysis, works with bar and line graphs and determines possible outcomes of given events. • In geometry and measurement, recognizes most two-and three-dimensional figures, identifies congruence and similarity, and solves simple indirect measurement problems with physical models. • Works backward and uses guess-and-check as techniques to solve problems. *(scale scores 674 to 717)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

HIGH SCHOOL **MATHEMATICS** AT GRADE 10

Proficiency Level	Proficiency Descriptors
Advanced	• Consistently demonstrates in-depth understanding of conceptual knowledge, problem solving skills and ability to communicate in a thorough, logical, and articulate fashion. • Utilizes tools of data analysis, probability, and statistics to thoroughly examine data, make inferences, and draw conclusions. • Demonstrates use of a wide variety of high level algebraic, geometric and measurement skills. • Uses direct and indirect reasoning, gives examples while solving problems, makes conjectures, and/or judges the validity of the inferences of other persons. *(scale scores 782 and above)*
Proficient	• Consistently demonstrates the ability to apply conceptual knowledge and skills to a variety of problems. • Shows mastery of computation with and without calculators and estimates computations in real-life situations. • Other numerical skills include working with patterns, ratio and proportion, formulas, and translating amongst equivalent forms such as exponents, fractions, decimals, percents, and scientific notation. • Uses data presented in graphical form to rationalize and support arguments, inferences or conclusions. • Works with probability of simple events, communicating about it with fractions, decimals and percents. • Competent demonstration of measurement skills, including facility with scale drawings, are well developed. *(scale scores 744 to 781)*
Basic	• Demonstrates somewhat competent success with most conceptual knowledge and skills, although level of mastery is less than that of proficient performance. • Supports conclusions with some clarity. • Somewhat competent with the basic operations with whole numbers, decimals, fractions, and percents. • Uses appropriate measuring tools to obtain direct measurements, and ratio and proportion for indirect measurements. • Algebraic skills include pattern recognition, substitution to solve equations and formulas, interpretation and use of expressions, and solution of one-step equations. • Works backwards and uses guess-and-check to solve problems. *(scale scores 716 to 743)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

ELEMENTARY **SCIENCE** AT GRADE 4

Proficiency Level	Proficiency Descriptors
Advanced	• Demonstrates all the characteristics of proficient performance and consistently exhibits superior performance. • Identifies appropriate tools and processes for conducting scientific investigations; interprets data, draws conclusions, and communicates scientific information. • Recognizes products of technology and man's impact on the environment. • Displays an in-depth understanding of Earth's surface, changes in matter and energy, and the interrelationship of organisms to the environment. *(scale scores 671 and above)*
Proficient	• Demonstrates a competent level of science literacy; compares charts and graphs and communicates them to others. • Identifies the tools needed for inquiry and can communicate about simple investigations. • Competently exhibits conceptual knowledge, skills and understandings about matter, energy, life cycles and the Earth. *(scale scores 619 to 670)*
Basic	• Demonstrates a good portion of expected conceptual knowledge in the science content of matter, energy, earth and space and living systems. • Exhibits a somewhat competent understanding and communication of charts and/or graphs and can transfer data from one to another. *(scale scores 587 to 618)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

MIDDLE LEVEL **SCIENCE** AT GRADE 8

Proficiency Level	Proficiency Descriptors
Advanced	• Demonstrates all the characteristics of proficient performance and consistently exhibits superior performance. • Interprets results of a controlled experiment, communicates about the results, and transfers the results to another experimental situation. • Demonstrates an in-depth comprehension of the content in living systems, earth and space systems, and physical systems. *(scale scores 729 and above)*
Proficient	• Makes inferences about an experiment. • Demonstrates a competent level of science literacy. • Demonstrates and communicates competent understanding of the concepts of living systems, earth and space science, and physical science. • Works with various types of visual displays of data and can communicate that information to others. *(scale scores 692 to 728)*
Basic	• Demonstrates a somewhat competent understanding of scientific concepts. • Makes observations from experiments and describes results with a limited scientific vocabulary. • Recognizes and recalls facts of life, earth and space, and physical sciences; and provides partial interpretations of those facts. • Shows partial knowledge of graphs and interpretation of charts. *(scale scores 662 to 691)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

HIGH SCHOOL **SCIENCE** AT GRADE 10

Proficiency Level	Proficiency Descriptors
Advanced	• Demonstrates all the characteristics of proficient performance and consistently exhibits superior performance including application of concepts to new and real world situations. • Interprets an experiment with complex results; transfers the results of scientific inquiry to a variety of settings. • Shows an in-depth understanding of how living systems, earth and space systems and physical systems are interrelated. *(scale scores 756 and above)*
Proficient	• Demonstrates a competent level of science literacy and content knowledge. • Evidence of competent understanding of the interrelationship of living systems, earth and space systems and physical science. • Shows a competent understanding of science inquiry and communicates the results using scientific vocabulary. • Uses logic in well developed presentations. • Applies science concepts to real world situations and provides explanations of how science concepts and principles impact society. *(scale scores 718 to 755)*
Basic	• Sometimes provides evidence of knowledge and application of scientific facts, vocabulary, concepts, and skills in science. • Demonstrates somewhat competent identification, construction, and communication of results based on scientific evidence. • Defines problems and designs scientific experiments that elicit reasonable conclusions somewhat competently. • Demonstrates limited understandings of science concepts literacy. • Demonstrates knowledge of science facts such as atomic theory, matter, chemistry, biology, earth systems. *(scale scores 685 to 717)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

ELEMENTARY **SOCIAL STUDIES** AT GRADE 4

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates an in-depth understanding of important knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates distinguished level of: • application and recall of content knowledge; • process, analysis, and interpretation of data from multiple sources; and • making inferences, creating, constructing and justifying responses. *(scale scores 661 and above)*
Proficient	Demonstrates a competent understanding of important concepts and skills drawn from civics, economics, geography, history and culture. Demonstrates adequate level of: • recall of content knowledge; • reading, interpretation of and completion of maps, charts, graphs, and pictures; • reading, analysis , drawing conclusions and making inferences from written information and using supporting reasoning. *(scale scores 627 to 660)*
Basic	Demonstrates somewhat competent understanding of concepts and skills drawn from civics, economics, geography, history and culture. Demonstrates inconsistent and incomplete: • recall of content knowledge; and • location of information on maps, charts, graphs, pictures and written sources. *(scale scores 608 to 626)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

MIDDLE LEVEL **SOCIAL STUDIES** AT GRADE 8

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates an in-depth understanding of knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates distinguished level of: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; • communication of complete explanations; and • analysis, synthesis, and investigation of problems, issues and situations. *(scale scores 702 and above)*
Proficient	Demonstrates a competent understanding of knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates adequate level of: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; • communicating explanations; and • analysis, synthesis, and investigation of problems, issues and situations. *(scale scores 670 to 701)*
Basic	Demonstrates somewhat competent understanding of knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates inconsistent and incomplete: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; and • communication of explanations. *(scale scores 649 to 669)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

HIGH SCHOOL **SOCIAL STUDIES** AT GRADE 10

Proficiency Level	Proficiency Descriptors
Advanced	Demonstrates in-depth understanding of broad content and higher level knowledge and skills from an expanding and increasingly difficult body of knowledge drawn from civics, economics, geography, history and culture. Demonstrates distinguished level of: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; • communication of explanations; and • analysis, synthesis, and investigation of problems, issues and situations. *(scale scores 721 and above)*
Proficient	Demonstrates competent understanding of higher level knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates adequate level of: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; • communication of explanations; and • analysis, synthesis, and investigation of problems, issues and situations. *(scale scores 692 to 720)*
Basic	Demonstrates somewhat competent understanding of knowledge and skills drawn from civics, economics, geography, history and culture. Demonstrates inconsistent and incomplete: • recall and application of content knowledge; • interpretation of maps, graphs, and other visual information and primary and secondary sources; • drawing conclusions and making predictions; and • communication of explanations. *(scale scores 674 to 691)*
Minimal Performance	Limited achievement. Evidence of major misconceptions or gaps in the knowledge and skills tested.

TABLE 4: **SUMMARY OF THE PROFICIENCY CATEGORIES**

IN TERMS OF *TERRANOVA* SCALE SCORE **APPROVED ON OCTOBER 20, 1997**

READING	Minimal Performance	Basic	Proficient	Advanced
Fourth Grade <*WI mean ss*>	~427 - 599	**600** - 624	**625** - 683 <*646.4>	**684** - 797+
Eighth Grade <*WI mean ss*>	~498 -654	***655** -671	***672** - 717 <*687.6>	***718** - 820+
Tenth Grade <*WI mean ss*>	~512 - 665	**666** - 693	**694** - 726 <*700.2>	**727** - 838+
LANGUAGE + WRITING	Minimal Performance	Basic	Proficient	Advanced
Fourth Grade <*WI mean ss*>	~455 - 605	**606** - 648 <*642.8>	**649** - *703*	**704** - 763+
Eighth Grade <*WI mean ss*>	~502 -649	**650** - 707 <*678.0>	**708** - *752*	**753** - 825+
Tenth Grade <*WI mean ss*>	~530 - 667	**668** - 714 <*696.8>	**715** - *756*	**757** - 835+
MATHEMATICS	Minimal Performance	Basic	Proficient	Advanced
Fourth Grade <*WI mean ss*>	~385 - 580	**581** - 622	**623** - 658 <*624.4>	**659** - 788+
Eighth Grade <*WI mean ss*>	~487 - 673	**674** - 717 <*696.0>	**718** - 749	**750** - 850+
Tenth Grade <*WI mean ss*>	~513 - 715	***716** - 743 <*725.2>	***744** - 781	**782** - 892+
SCIENCE	Minimal Performance	Basic	Proficient	Advanced
Fourth Grade <*WI mean ss*>	~400 - 586	**587** - 618	**619** - 670 <*638.3>	**671** - 799+
Eighth Grade <*WI mean ss*>	~483 - 661	**662** - 691	**692** - *728* <*691.9>	**729** - 857+
Tenth Grade <*WI mean ss*>	~489 - 684	**685** - 717 <*709.0>	**718** - *755*	**756** - 893+
SOCIAL STUDIES	Minimal Performance	Basic	Proficient	Advanced
Fourth Grade <*WI mean ss*>	~430 - 607	***608** - 626	***627**-660 <*645.8>	**661** - 763+
Eighth Grade <*WI mean ss*>	~515 - 648	**649** - 669	**670** - 701 <*688.4>	**702** - 803+
Tenth Grade <*WI mean ss*>	~530 - 673	**674** - 91	**692** - 720 <*704.7>	**721** - 821+

WI mean scale score from the Fall 1996 *WSAS Knowledge & Concepts Examinations*

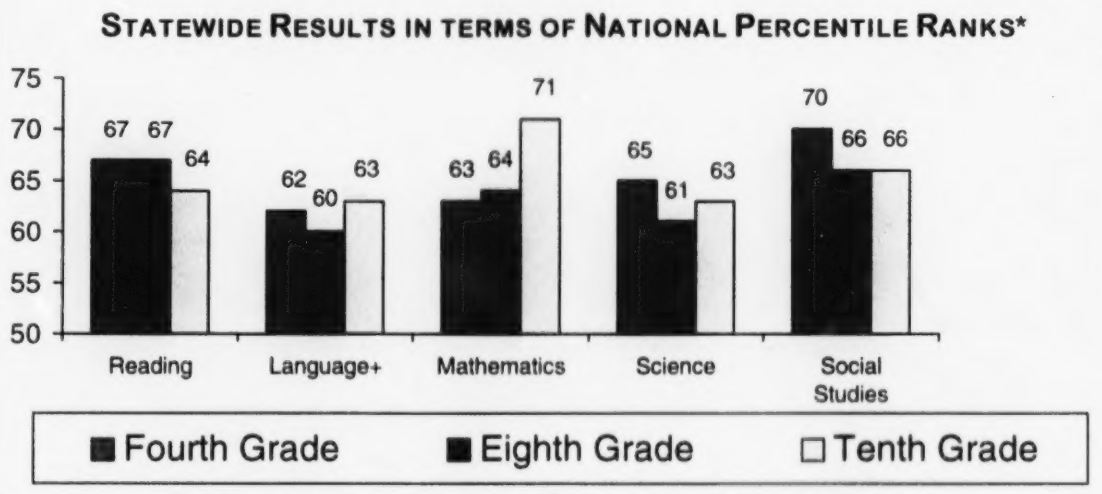
*The following cut scores were adjusted by one standard error of measurement on October 20, 1997: 10th grade Mathematics, 4th grade Social Studies, and 8th grade Reading. Cut scores appear in bold.

BEST COPY AVAILABLE

V. How do Wisconsin students compare with others?

On the fall 1996 *Knowledge & Concepts Examinations*, Wisconsin students at all three grades scored well above the nationwide comparison group on the multiple choice and short answer sections of the test. The following graph indicates how well Wisconsin students compare with the nationwide comparison sample (national norm group) on these tests.

Wisconsin's fall 1996 performance compared with a nationwide comparison sample:



Wisconsin results from the October 1996 administration of the *TerraNova* levels 14, 17, and 19.

Using percentiles and comparing with a referent group is the way we've primarily looked at performance in the past. Statewide, Wisconsin students' scores generally rank higher than national averages on standardized achievement tests. But, what does that mean in terms of the knowledge and concepts that they know and can demonstrate? Is their performance on important skills good enough?

Proficiency score reports are designed to answer these questions about some important content as measured by these achievement tests. In the future, the primary method of reporting and use of WSAS *Knowledge & Concepts* scores will be in terms of the proficiency score standards. The normative information that was provided in the past will continue to be provided.

Table 5 provides a context for the percentages of Wisconsin students performing in each proficiency category found in Table 3. On Table 5, the performance by the national norm group is described using the Wisconsin Proficiency Category cut scores. The national comparison group does not display a "not tested" category since the inclusion practices varied somewhat across the sampled schools. Therefore, the percentages of students are based on the total students in the national sample.

In general, fewer students in the national norm group scored in the Proficient and Advanced categories than did Wisconsin students..

Table 5:

ESTIMATED PERCENTAGE OF STUDENTS IN THE NATIONAL COMPARISON GROUP USING WISCONSIN PROFICIENCY CUT-SCORES

National Comparison Group	Proficiency Category			
	Minimal Performance	**Basic**	**Proficient**	**Advanced**
READING				
Elementary **Grade 4**	26%	19%	44%	11%
Middle level **Grade 8**	30%	21%	37%	12%
High school **Grade 10**	28%	27%	31%	14%
LANGUAGE ARTS				
Elementary **Grade 4**	26%	40%	29%	5%
Middle level **Grade 8**	30%	55%	12%	3%
High school **Grade 10**	35%	44%	15%	6%
MATHEMATICS				
Elementary **Grade 4**	20%	38%	31%	11%
Middle level **Grade 8**	42%	37%	15%	6%
High school **Grade 10**	60%	23%	13%	4%
SCIENCE				
Elementary **Grade 4**	18%	26%	44%	12%
Middle level **Grade 8**	29%	30%	30%	11%
High school **Grade 10**	38%	30%	26%	6%
SOCIAL STUDIES				
Elementary **Grade 4**	28%	19%	36%	17%
Middle level **Grade 8**	23%	21%	35%	21%
High school **Grade 10**	31%	19%	30%	20%

*Fall 1996 Nationwide Comparison Sample Group performance on *TerraNova* Levels 14, 17, 19.

VI. Who were the participants in the April 1997 Standard Setting Panels

Final: Nine panels, 185 panelists, 19-22 per panel (plus 4 canceled, 1 excused, 2 illnesses)

8th/10th Social Studies

Harland L. Stone	Arcadia Schools
Ellen A. Nelson	Ashland High School
Cheryl A. Hafeman	Beecher-Dunbar-Pembine - HS
Gene Van Galder	Beloit Memorial High School
Bill Godfrey	Cedarburg High School
Bob Tomczyk	Clintonville High School
Lee C. Button	Fox Valley Technical College
Cynthia Jacobson	Holmen - Viking Elementary School
Hal Balsiger	Madison Metro
Dave Wessel	Manitowoc - Lincoln H S
Michelle Trevino	Milwaukee - Grand Ave School
Mark Kaminski	Milwaukee Education Center Middle
Deborah Jansch	Neenah Jt. Schools-Shattuck Middle
Dave Polashek	Oconto Falls District Office
Sandra J. Owens	Oregon Schools - Middle Schl
Jeff Ryan	Prescott H S
Robert Hayes	Racine Case H S
Pete Edwards	Reedsburg - Webb High School
Pauline Doucette	Rhinelander School Board
Derrick Krey	Valders Middle Schl
Christopher Dich	Waukesha - Horning Middle School
Peter L. Gust	Wisconsin Dells Schools - HS

8th/10th Science

Loren R. Ebert	Adams-Friendship Jr High
Mr. Lynn Hoernke	Adams/Friendship - Adams
Lois Corey	Black River Falls Administrative Office
Linda Luger	Burlington Middle School
Stephen Johnson	Butternut Schools
John A. Nevins	Crandon High Schools
Rodney C. Johnson	Eau Claire North High School
Barbara Meyocks	Kenosha Unified - Tremper HS
Jane Dietz	Marion School District-Jr./Sr. HS
Carolyn S. Stoner	Milton CESA #2
Laura M. Hellman	Milw - J. Robinson Accelerated Middle
Susan Kowalski	Milwaukee - Cosmic Center
Kathleen Damrow	Milwaukee - Custer HS
Tim Sharpe	Monona Grove H S
Paula Barsamian	Pewaukee High Schl
Jon Christian	Racine - Mitchell Middle
Marise Hussey	Waukesha Area Technical College
Carolyn Reese	Waunakee Middle School
Steve Kipfer	Wisconsin Rapids - East Junior High

8/10th Mathematics

Arnold T. Lee	Beloit School Board
Margaret Kaduce	Chippewa Falls Middle School
Barbara A. Ries	Chippewa Valley Technical College
Jim Coles	Green Bay CESA #7
Gerald Sonnleitner	Green Lake Schools - HS
Rosemary Chown	Holmen Middle Schl
Ingrid Johnson-Evwold	Maple -Northwestern Middle Schl
Michael W. Hulett	Menomonie Area Schools - HS
Peter Raphael	Menomonie H S
Kathleen Schactner	Milw - James Madison University HS
Michael J. Will	Milwaukee - Cass Street School
Elizabeth Freeman	Milwaukee - Cosmic Center
Jeff Kloko	Milwaukee - Cosmic Center
Ms. Ouida Williams	Milwaukee - Jackie Robinson
Sara Nowacki	Muskego-Norway - Bay Lane Middle
Rich Mohnsen	New Richmond High School
Mr. Terry Wozny	Port Washington H S
Nancy Crow	Rhinelander High School
Debra Ottman	River Falls High School
Larry Svaton	Stevens Point Schools - Ben Franklin
Jim Marty	Waukesha North HS
Stephanie Luther	Wisconsin Heights High Schl

10th Reading, Language Arts+ Writing

Tom Holtgreive	Adams-Friendship High School
Sylvia Doyle	Cuba City High School
Bonnie Frechette	De Pere - West De Pere HS
Steve Kittleson	Grafton High School
Kathy Schneider	Kettle Moraine H S
Priscilla K. Parsons	Madison Metro Memorial High Schl
Hugh Foster	Manitowoc Schls-Lincoln HS
Victoria Frazier	Milw - Professional Devlpmnt Cntr
Joan Pond	Park Falls Schools -HS
Dorothy Berg	Pittsville School District-HS
Mary Krubsack	Prescott Senior H S
Meredyth L. Albright	Rhinelander Daily News, Mng.Editor
Maria Gjovig	Saint Croix Central Jr/Sr HS
Edythe Lanswick	Solon Springs Schools - HS
Marlene Ott	South Milwaukee School District-HS
David Natwick	Sturgeon Bay High School
Nancy Berklund	Tomah Schools - District Office
Kathleen Brown	Waukesha - Catholic Memorial HS
Sandra Zinos	Waukesha - West H S
Michael Fraundorf,	West Allis-West Milw-Central HS

8th Reading, Language Arts+ Writing

Dawn Mattson	Antigo Middle School
Kathryn Duerr	Barron - Riverview Middle Schl
Marie Leonard	Eau Claire South Middle School
Susan A. Schumann	La Crosse - Hogan Admin Cntr
Claudia Whitty	Lomira - HS, Theresa Elem
Thuy Pham-Remmele	Madison Public Schools
Autrio E. Reed	Milwaukee - Fritsche Middle
Beth A. Puestow	Milwaukee - Sarah A. Scott
Darlene A. Junker	Milwaukee - Story Elementary
Paulette Timm	Mt. Horeb
Elizabeth Smith	Pardeeville - Pardeeville Elem
Barbara Karst	Port Washington - T. Jefferson
Jennifer Sue Muffick	Racine - McKinley Middle School
Sandra Riekoff	Racine Unified Schools - Park HS
Beth Ann Palm	Spring Valley - Middle/High Schl
Barbara Massoglia	Stevens Point - Ben Franklin Jr HS
Barbara Patch	Sun Prairie Middle Schl
MaryJane Best Louther	UW Green Bay Cntr Educ/Workforce
Nancy L. Thompson	Waterloo School Board
Janice Cronin	West Allis-West Milwaukee Admin
Mary Hackney	Wisconsin Rapids Schools

4th Reading, Language Arts+ Writing

Sandra Orie	Bonduel Elementary School
Mary Atkinson	Clinton Schools - Clinton Elem
Alice Weickelt	Eau Claire - Longfellow School
Rob Modjeski	Eau Claire Locust Lane Elementary
Maribeth Monday	Fond du Lac - Evans Elem
Sharon M. Rychter	Green Bay Schools - Jefferson Elem
Sandra Fuhrman	Holmen Schools
Dinah M. Faust	Mauston Schls - West Side Elem
Graciela de la Cruz	Milwaukee - Allen-Field School
Sherita Brazil	Milwaukee - Byron Kilbourn
Paulette Copeland	Milwaukee - Samuel Clemens
Emanuel Daniels	Milwaukee Schls-Phillip Wheatley
Lori Wagner	Mukwonago - Prairie View Elem
Pam Healy	New Richmond - West Elem
John Tyson	Oshkosh Schools - Merrill Elem
Cynthia C. Weiss	Racine
Margaret Allen	Rhinelander School District
Mary Bebie	River Falls Schls - Westside Elem
George Winter	Spring Valley - Elementary/Middle
Bonnie Wolden	Superior - Lake Superior Elem
Penny Antell	Tomorrow River - Amherst Elem

4th Social Studies

Jeffrey Rusch	Appleton - Edna Ferber Elem
Linda Soos	Boscobel Elementary
Cathie Plaehn	Boyceville District-Tiffany Creek Elem
Betty Bechel	Durand - Caddie Woodlawn Elem
Julie M. Hannon	Freedom Schools - Freedom Elem
Abbe Krissman	Greenfield Schls - Elm Dale Elem
Heidi Vogel	Janesville Schls - Wilson Elem
Mike McKinnon	Janesville Schools
Kathie Tyser	LaCrosse - Hogan Administrative Cntr
Ann C. Walser	Madison - Shorewood Elem
Marsha T. Denny	Menomonee Falls - Valley View
Theresa Schoessaw	Mequon-Thiensville - Wilson Elem
S. Jane O'Neill	Monroe - Abraham Lincoln Elem
Mary M. Frank	Osseo-Fairchild Elem
Jerene Mortenson	River Falls Westside Elem
Rose Main-Helm	Stevens Point - Jackson Elem
Berland Meyer	Wausau Public - Central Office
Bonnie Vander Meulen	Whitewater - Lincoln Elem
Ken Wood	Wisconsin Rapids - Howe Elem

4th Science

Ann Smejkal	Algoma Elementary
Dan Tripp	Barron Schools - Woodland Elem
Peter Richardson	Beloit Schools - Converse Elem
Don Tincher	Berlin Schls - Clay Lamberton
Laurie Hittman	Eau Claire Central Office
Barbara Pladziewicz	Elk Mound Schls - Moundview Elem
Debra Keller	La Crosse - Jefferson Elem
Carol Parsons	Lafarge Elem
Tom Bobrofsky	Loyal Elementary
Mary Jan Rosenak	Madison School Board
Janet Kane	Middleton School Board
Christina Parsons	Milwaukee - H. D. Thoreau
Bonnie Edward	Milwaukee - Starms Elem
Jan Weiler	Milwaukee- Golda Meir School
Joan M. Jennings	Milwaukee-Cosmic Center
Linda Caraher	Monona Grove
Eileen Nemec	Mt Horeb - Intermediate Center
Pamela Freiberg	Oshkosh - Sunset Elem
John Surendonk	Racine - Gifford IMC
Teri Mueller	Southern Door Elementary
Debbie Petzel	Unity (Balsam Lake) Elementary

4th Mathematics

LeAnn Jungenberg	Adams-Friendship Elementary
Florence Kunstman	Boscobel Elementary School
Nancy Dignan	East TroySchool Board
Carolyn Keeler	Fond du Lac School District Ofc
Linda Somers Sanderson	Greenfield - Elm Dale
Ms. Chris Gering	Greenfield Schls - Elm Dale Elem
Jan Marson	La Crosse - Jefferson Elem
Ann Bents	Manitowoc - Jefferson Elem
Debra Bilzing	Middleton
Connie Pauletich	Milwaukee -HD Thoreau
Diane Price	Milwaukee Public Schools-MUSI
Jeanne Czech	Oconto Falls - Washington
Bart Appleton	Prescott School District-Malone Elem
Scott Miatech	Racine - Giese Elem
Nancy Hart	Racine - Red Apple Elementary
Diana Kasbaum	Sun Prairie - Eastside Elem
Tom Bredesen	Three Lakes Schools
Rebecca Vail	Twin Lakes Jt #4
Sue Hamm	Wisconsin Rapids - Howe Elem
Patricia Nimtz	Wisconsin Rapids - Washington Elem

Official Observers

Office of Educational Accountability
Will Ashmore
Maggie Burke
Frank Evans
Rajah Farah
John Fortier
Darwin Kaufman
Susan Ketchum
Jean Whitcomb

Division for Learning Support: Instructional Services
MaryAnn Evans-Patrick
Shelly Fisher
Jacque Karbon
Jim Moser
Pauli Nikolay
Karen Prickette

Division for Learning Support: Equity and Advocacy
Jodean Grunow

Wisconsin Education Association Council
Russell Allen

Table 6: GEOGRAPHIC REPRESENTATION OF THE STANDARD SETTING PANELS

Panel / *Geographic Representation*	*Milw*	*CESA* 1	*CESA* 2	*CESA* 3-4	*CESA* 5	*CESA* 6	*CESA* 7-8	*CESA* 9-10	*CESA* 11-12	Total
8/10th Social Studies	2	3	3	2	2	2	5	1	2	22
8/10th Science	3	4	4	1	3	-	2	1	1	19
8/10th Mathematics	5	3	2	1	1	1	1	3	5	22
10th Reading, Language+	2	5	1	2	2	-	3	1	4	20
8th Reading, Language+	3	4	4	1	3	1	1	2	2	21
4th Social Studies	-	3	5	2	2	2	-	2	3	19
4th Science	4	1	4	3	-	2	2	2	3	21
4th Reading, Language+	4	3	1	1	2	2	2	3	3	21
4th Mathematics	2	4	4	2	3	1	2	1	1	20
Total	25	30	28	15	18	11	18	16	24	185

ps~fin.doc 11/3/97